



UNITED STATES PATENT AND TRADEMARK OFFICE

UNITED STATES DEPARTMENT OF COMMERCE
United States Patent and Trademark Office
Address: COMMISSIONER OF PATENTS AND TRADEMARKS
Washington, D.C. 20231
www.uspto.gov

APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/831,097	05/03/2001	Michael Zobel	M0-6332/LEA	8436

157 7590 08/21/2002

BAYER CORPORATION
PATENT DEPARTMENT
100 BAYER ROAD
PITTSBURGH, PA 15205

EXAMINER

ASINOVSKY, OLGA NMN

ART UNIT	PAPER NUMBER
----------	--------------

1711

DATE MAILED: 08/21/2002

7

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary

Application No.
09/831,097

Applicant(s)
Zobel et al

Examiner
Olga Asinovsky

Art Unit
1711



-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136 (a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133).
- Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on Jun 5, 2002.
- 2a) ☒ This action is **FINAL**. 2b) ☐ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11; 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-6 and 17-26 is/are pending in the application.
- 4a) Of the above, claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1-6 and 17-26 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claims _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are a) ☐ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
- 11) ☐ The proposed drawing correction filed on _____ is: a) ☐ approved b) ☐ disapproved by the Examiner.
If approved, corrected drawings are required in reply to this Office action.
- 12) ☐ The oath or declaration is objected to by the Examiner.

Priority under 35 U.S.C. §§ 119 and 120

- 13) ☒ Acknowledgement is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☒ All b) ☐ Some* c) ☐ None of:
1. ☒ Certified copies of the priority documents have been received.
 2. ☐ Certified copies of the priority documents have been received in Application No. _____.
 3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

*See the attached detailed Office action for a list of the certified copies not received.

- 14) ☐ Acknowledgement is made of a claim for domestic priority under 35 U.S.C. § 119(e).
- a) ☐ The translation of the foreign language provisional application has been received.
- 15) ☐ Acknowledgement is made of a claim for domestic priority under 35 U.S.C. §§ 120 and/or 121.

Attachment(s)

- 1) ☐ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☐ Information Disclosure Statement(s) (PTO-1449) Paper No(s). _____
- 4) ☐ Interview Summary (PTO-413) Paper No(s). _____
- 5) ☐ Notice of Informal Patent Application (PTO-152)
- 6) ☐ Other:

Art Unit: 1711

DETAILED ACTION

The cancellation of claims 8 and 13 is noted.

The present claims are 1-6 and 17-26.

Claim Rejections - 35 U.S.C. § 102 or 103

1. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless -

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

Claims 1-6 and 17-26 are rejected under 35 U.S.C. 102(b) as anticipated by or, in the alternative, under 35 U.S.C. 103(a) as obvious over Gallagher U.S. Patent 3,969,431.

The amended independent claim 1 discloses a polymer prepared from at least one ethylenically unsaturated monomer selected from the group consisting of mono- or poly-unsaturated olefins, vinyl acetate, styrene, alpha-methylstyrene, styrene substituted at the nucleus, vinyl cyanides, maleic anhydride, N-substituted maleimides, chloroprene, C1 - C8-alkyl acrylates and C1 - C8-alkyl methacrylates, wherein said polymer is selected from at least one of homopolymers and copolymers, having a mean particle diameter of 0.04 micron to 1 micron, and

Art Unit: 1711

contains \leq 100 ppm of coarse portions having a mean particle diameter of from 200 to 500 microns.

In other words, the issue of the invention is a homopolymer or a copolymer having fine particles having diameters in the range of 0.04 microns to 1 micron. Also, said homopolymer or copolymer contains less than or equal 100 ppm of coarse particles having diameters of from 200 to 500 microns.

The rejection is set forth at pages 3-4 of the office action mailed on 1/25/02, paper No. 4 and is incorporated here by reference.

Applicant's arguments filed 06/05/02 have been fully considered but they are not persuasive.

The applicants' argument is that Gallagher discloses only a polymer having small particles in the range of from about 0.06 - 0.1 microns, column 4, line 38. There is no teaching in Gallagher that a polymer has both a polymer particle diameter of 0.04 microns and 100 ppm of coarse portion having a polymer particle diameter of from 200 to 500 microns. Also, applicants argue that there is no graft polymerization process in Gallagher's invention.

Reference to Gallagher specifically teaches a composition comprising an intimate admixture of (a) a rigid polymer of vinyl chloride and (b) interpolymer particles, claim 1 at column 10. The interpolymer particles consist essentially of (i) an emulsion acrylate copolymer and (ii) a vinyl chloride polymer which has been suspension polymerized in the presence of said acrylate copolymer and which surrounds and/or is homogeneously dispersed within the mass of said crosslinking acrylate copolymer. The elastomeric acrylic copolymer latex (i) having particle size of 0.1 to 0.8 microns (column 4, lines 36-38) is readable in the applicants' claimed fine particles of homopolymer or copolymer in the present claim 1. The interpolymer particles are produced by

Art Unit: 1711

suspension polymerization of vinyl monomer in the presence of an acrylate copolymer latex, column 1, lines 51-64. The resulting particles may be termed as “suspension-emulsion interpolymer” (SEI) have a particle size in the range of from 10 to 200 microns, column 8, line 49. In the working example 1 at column 10, line 20, the SEI particles have an average particle size of 100 microns. In the amended claims 1-6 the content of coarse (co)polymer particles having diameter of from 200 to 500 microns in the amount of less than 100 ppm can be considered as zero amount in light of the term “less than.” If the coarse particles of (co)polymer is present in the present claim 1, thus, the coarse particles of (SEI) in Gallagher’s invention having particle size in the range of 100 to 200 microns are within the scope of the present claims.

Therefore, Gallagher discloses the latex particles of the emulsion acrylate copolymer having particles size in the range of from 0.1 to 0.8 microns (column 4, lines 36-38), and the polymer powder SEI having a coarse particle size of from 10 to 200 microns (column 8, lines 47-49). Since the SEI particles are produced by a suspension process in the form of agglomerates (column 1, lines 58-62), the resulting particle’s size is under control for obtaining the desired particle size. The coarse polymer particles having diameters of from 200 to 500 microns are either taught in the reference or inherent therein. It is reasonable to presume that the properties of the thermoplastic resin in Gallagher’s invention can be controlled by selecting an amount (or portion) of the large particles size of being present in said thermoplastic resin composition. It is a burden on the applicants to provide the difference in order to overcome these rejections under *In re Fitzgerald* 205 USPQ 594.

The “suspension-emulsion interpolymer” (SEI) particles serve as an impact modifier for rigid vinyl chloride polymers. Gallagher discloses that rigid vinyl chloride polymers are reinforced by admixture with a plurality of elastomer-containing interpolymer particles, column 9, lines 15-16. The vinyl chloride polymers are readable in the term thermoplastic polyolefins in the newly added claim 25. It is obvious to one having ordinary skill in the art to use PVC reinforced with elastomer-containing interpolymer particles in Gallagher’s invention for producing thermoplastic

Art Unit: 1711

molding articles. And, it would have been obvious to one of ordinary skill in the art to use a reinforcement vinyl chloride resin with suspension emulsion interpolymers (SEI) for producing a thermoplastic molding composition wherein a said composition can be modified by adding a flameproofing agent and/or inorganic compound (for the present claims 23-24) because the molding composition can be modified for obtaining the desired physical properties such as impact strength, good surface appearance and a flameproofing property. The molding compositions in the present claims 21-22 and 26 disclose different thermoplastic resins. It would have been obvious to one of ordinary skill in the art to use SEI interpolymer in Gallagher's invention as a reinforcing agent for reinforcing polycarbonate, polyester or other thermoplastic material because the interpolymer in Gallagher's invention is a reinforcing agent and Gallagher does not teach a reaction between the reinforcing agent and modified vinyl chloride resin.

The conditions of producing a polymer having fine particles and coarse particles in the present application are not claimed. Therefore, the applicants' argument that Gallagher does not disclose the graft polymerization process is not accepted.

THIS ACTION IS MADE FINAL. Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire THREE MONTHS from the mailing date of this action. In the event a first reply is filed within TWO MONTHS of the mailing date of this final action and the advisory action is not mailed until after the end of the THREE-MONTH shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however,

Art Unit: 1711

will the statutory period for reply expire later than SIX MONTHS from the mailing date of this final action.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Olga Asinovsky whose telephone number is (703) 308-0041. The examiner can normally be reached on Monday to Friday from 8am to 4:30pm.

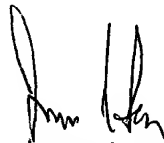
If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, James Seidleck, can be reached on (703) 308-2462. The fax phone number for the organization where this application or proceeding is assigned is (703) 305-7718 and (703) 872-9311 after final.

Any inquiry of a general nature or relating to the status of this application or proceeding should be directed to the receptionist whose telephone number is (703) 308-0661.

O.A.

O.A.

August 19, 2002


James J. Seidleck
Supervisory Patent Examiner
Technology Center 1700